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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/758,764

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Akira Yamaguchi

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05/16/2008

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EXAMINER

RUTHKOSKY, MARK

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

05/16/2008

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/758,764

**Applicant(s)**

YAMAGUCHI ET AL.

**Examiner**

Mark Ruthkosky

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.  
4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☐ Claim(s) 1-7 and 16 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/CIS)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/3/2008 has been entered.

### ***Claim Objections***

Claims 1-7 are objected to because of the following informalities:

Using a trademark *in a claim* is indefinite, as a trademark or trade name is used to identify a source of goods, and not the goods themselves (see MPEP 2173.05(u).) Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. See definitions of trademark and trade name in MPEP §608.01(v). As the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The rejection of claims 1-3 and 16 under 35 U.S.C. 102(b) as being anticipated by Mitsufumi et al. (JP 09-035,718.) have been overcome by applicant's amendment to the claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsufumi et al. (JP 09-035,718) in view of Takeuchi et al. (US 5,807,645) OR over Takeuchi et al. (US 5,807,645) in view of Mitsufumi et al. (JP 09-035,718)

Mitsufumi et al. (JP 09-035,718) teaches a non-aqueous electrolyte battery comprising an anode having an anode mixture containing an anode active material, and a cathode having a cathode mixture containing a cathode active material, said anode and the cathode being layered together via a separator (see paragraphs 2-33, figure 1 and the corresponding text); a solid electrolyte including a polymer material and an electrolyte salt contained therein ( p. 28-29 and 35); and a film-shaped exterior material housing therein said battery device and the solid electrolyte (see figure 1 and p. 30 and 40); wherein a gas adsorbing carbon material formed of a carbonaceous material having a specific surface not less than 30 m<sup>2</sup>/g, said gas adsorbing carbon material being added to said anode mixture and/or said cathode mixture for adsorbing a gas evolved within the battery (abstract, p. 23-26.) Carbon black is activated carbon as it absorbs

gasses and is noted in an amount of 0.1-4% in the anode (p. 23-26.) Ketchien black and furnace black are taught in paragraph 25. Ketchien black and Ketjen black are the same material as noted above. The carbon material is taught to have a specific surface area of not less than 700 m<sup>2</sup>/g.

Mitsufumi et al. (JP 09-035,718) does not teach the battery having a lithium anode, a high surface area carbon added to the cathode mixture in an amount of 0.2-8 wt. %, or a gel electrolyte comprising a non-aqueous electrolyte solvent. Takeuchi et al. (US 5,807,645) teaches a battery comprising a lithium alloy anode, a positive electrode comprising acetylene black or carbon black having a surface area of not less than 30 m<sup>2</sup>/s (claim 20) in a range of 1-10 and 2-8 wt. % (see example 1, claims 7-8 and 22-23.) Ketchien black and other carbon black materials are taught in cols. 7-9. Further, the battery includes a gel electrolyte comprising a lithium salt in a non-aqueous electrolyte solvent that is added to a polymeric separator (col. 5, line 7 to col. 6, line 15.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a high surface area carbon material in the cathode of Mitsufumi et al. (JP 09-035,718) OR to include a high surface area carbon in the anode of Takeuchi et al. (US 5,807,645), as both references teach that adding high surface area carbon diminishes cell swelling, suppresses an increase in internal pressure, and improves the charge transfer capability of the batteries (as taught in the references.) Further, lithium anodes are taught in alkali batteries to generate electrons and power the battery. One skilled in the art would use the anode materials taught in the prior art as the anode in an alkali batteries of record. Based on the teachings of the references, one skilled in the art would be motivated to use more than one type of active carbon because each carbon material noted is taught to absorb gasses and conduct electrons in the

electrode mixture. The high surface area carbon materials are taught to absorb gasses within the volume of the structure.

Further, using an electrolyte having a non-aqueous solvent would have been obvious to one of ordinary skill in the art at the time of the invention based on the electrolyte materials used in the battery. One of ordinary skill would recognize that aqueous solvents would be used in alkaline hydroxide cells and the non-aqueous solvent electrolytes will be used in lithium ion batteries. One skilled in the art would be motivated to use a non-aqueous solvent with electrodes that destructively react with water, such as lithium based anodes. The artesian would have found the claimed invention to be obvious in light of the teachings of the references.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsufumi et al. (JP 09-035,718) in view of Takeuchi et al. (US 5,807,645) OR over Takeuchi et al. (US 5,807,645) in view of Mitsufumi et al. (JP 09-035,718) as applied above, in view of Bannai (US 6,503,656 and EP 1,063,713.)

Mitsufumi et al. (JP 09-035,718) and Takeuchi et al. (US 5,807,645) teach non-aqueous electrolyte batteries, as noted. The battery may be housed in a cylindrical or square shaped housing. The references do not teach the battery to have a laminate film of a metal layer and a resin layer as an exterior casing material. Bannai et al. (EP 1,063,713) teaches a battery to have a laminate film of a metal layer and a resin layer as an exterior casing material (see the claims, p. 21-22.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to house the batteries of Mitsufumi and Takeuchi in a casing of a laminate film having a metal layer and a resin layer in order to provide a durable, light-weight casing that has low

permeability due to the metal layer and high sealability due to the resin layer (see '713, p. 2-4.) The artesian would have found the claimed invention to be obvious in light of the teachings of the references.

### ***Response to Arguments***

Applicant's arguments filed 3/3/2008 with regard to the amended claims have been fully considered but are moot in view of the new rejections based on the amended claims. Further, the arguments based on the art applied are not persuasive.

Applicant argues that Mitsufumi et al. does not teach or even fairly suggest using a carbonaceous material *for the purpose of absorbing gas*. As such, Mitsufumi et al. fails to teach or suggest all the limitations of claim 1. This argument is not persuasive because the rejection notes the teaching of carbon material in the prior art, as applied. The carbon material inherently has the same gas absorbing properties as the carbon material claimed because they are the same material. It is elementary that the mere rectification of a newly discovered function or property inherently possessed by inventions in the prior art does not cause a claim drawn to distinguish over the prior art, In re *Swinehart*, 169 U.S.P.Q. 226.

Applicant argues that Takeuchi et al. does not teach or even fairly suggest the use of a carbonaceous additive with a high surface area range as discussed above in the claimed invention and Mitsufumi et al. teaches the use of a carbonaceous material as a conducting material but does not teach or even fairly suggest adding a high surface area carbon to the cathode mixture. Thus, applicant concludes, either taken singularly or in combination with each other, the cited references fail to teach or even fairly suggest the addition of a high surface area carbon to an

anode or a cathode. This argument is not persuasive because each reference teaches a carbon material having a surface area of not less than  $30 \text{ m}^2/\text{s}$  as noted in the rejection.

***Examiner Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

/Mark Ruthkosky/

Primary Examiner, Art Unit 1795